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EXAMINER
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte YAKUP GENC, YING ZHU, MATHÄUS DEJORI, and
FRANK DIERKES[1]

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Appeal 2016-004316
Application 13/527,114
Technology Center 2400

_____

Before MICHAEL J. STRAUSS, DANIEL N. FISHMAN, and
JAMES W. DEJMEK, *Administrative Patent Judges*.

FISHMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a final rejection of
claims 1–11 and 13–21. Claim 12 has been canceled. Final Act. 2. We
have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We affirm.

THE INVENTION

Appellants' invention is directed to monitoring parking spots. Spec.,
Abstract. A vehicle includes a camera for generating image data of parking

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spots. *Id.* The image data is processed along with data from a laser scanner to determine an occupation status of a parking spot. *Id.*

Independent claim 1, reproduced below, is representative:

1. A system to monitor a parking spot, comprising:

a remote computer to receive data related to the parking spot;

a first vehicle comprising:

a camera to generate image data of a parking spot;

a location device that generates geographic coordinates of the vehicle;

a computing device that receives the image data generated by the camera and the geographic coordinates of the first vehicle and provides a time stamp and a compass heading of the camera;

a communication device that transmits data related to the parking spot to the remote computer; and

a laser scanner range finder calibrated with the camera on the first vehicle and oriented to scan the parking spot and generate a scan; and

wherein the remote computer is enabled to inform a second computing device of an occupation status of the parking spot, and wherein the occupation status is based in part on the scan being indicative of an area of the image generated by the camera relative to a predetermined area of the parking spot.

THE REJECTIONS

Claims 1–4, 6–11, and 13–21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sonnabend et al. (US 2014/0132767 A1; May 15, 2014) ("Sonnabend") and Shirmila Mohottala et al., *Fusion of a Camera and a Laser Range Sensor for Vehicle Recognition*, 2009 IEEE Computer

Society Conference on Computer Vision and Pattern Recognition
Workshops, 2009, at 16–19 ("Mohottala"). Final Act. 4–14.

Claim 5 stands rejected under 35 U.S.C. § 103(a) as being
unpatentable over Sonnabend, Mohottala, and Reem Zeibak et al., *Change
Detection via Terrestrial Laser Scanning*, ISPRS Workshop on Laser
Scanning 2007 and Silvilaser 2007, Sept. 2007, at 430, 432, and 434
("Zeibak"). Final Act. 15–16.

ANALYSIS

Only those arguments actually made by Appellants have been
considered in this Decision. Arguments Appellants did not make in the
Briefs are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

We are not persuaded by Appellants' contentions of Examiner error
(App. Br. 6–12; Reply Br. 4–9). We adopt as our own the Examiner's
findings and reasons set forth by the Examiner in the action from which this
appeal is taken (Final Act. 2–16) and as set forth by the Examiner in the
Answer (Ans. 2–19). However, we highlight and address specific arguments
and findings for emphasis as follows.

Claims 1–4, 6–11, and 13–21

Claim 1 recites, in part, "a computing device that receives the image
data generated by the camera . . . and provides a time stamp and a compass
heading of the camera." The Examiner finds Sonnabend discloses this
feature. Final Act. 6 (citing Sonnabend ¶¶ 196, 272, 285, Figs. 34, 35).
Appellants argue Sonnabend fails to disclose the recited compass heading of
the camera (App. Br. 8–10; Reply Br. 5–6), specifically asserting paragraph

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272 of Sonnabend teaches storing compass heading data in a database, but argue Sonnabend does not teach providing compass heading data of a camera as claimed (App. Br. 10).

Appellants' contentions are unpersuasive of Examiner error. The Examiner finds, and we agree, "paragraph 272 discloses the compass heading data of the video capture (via a camera) is stored in a system; in other words a compass heading data of a video capture/camera has to be obtained or acquired if said data is going to be stored in a system." Ans. 15. Paragraph 272 of Sonnabend (emphasis added) clearly recites "the compass heading data *of the video capture* is also stored in the system."[2] By disclosing storing the compass heading data of the *video capture*, Sonnabend teaches or suggests providing the video capture. Thus, a compass heading data of *video capture* suggests providing a compass heading data of the device that captures the video (the claimed "camera"). Accordingly, we find Sonnabend suggests providing a compass heading of a camera as claimed.

Claim 1 also recites a remote computer informs a second computing device of "an occupation status of the parking spot, and wherein the occupation status is based in part on the scan being indicative of an area of the image generated by the camera relative to a predetermined area of the parking spot." The Examiner finds Sonnabend discloses a system for detecting parking spots and their occupancy status and finds paragraph 184 discloses a "camera management system can control the camera, for

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[2] Sonnabend paragraph 272 erroneously refers to Figure 35 but clearly describes Figure 34. A number of similar typographic errors appear in Sonnabend's brief descriptions of its figures. Regardless of the typographic errors, paragraph 272 still discloses provision of a compass heading of the camera as recited in claim 1.

example…recognizing open parking spots…" Final Act. 6 (citing Sonnabend ¶¶ 17, 29). The Examiner further finds Sonnabend teaches determining "open/vacant parking spot[s]" based on an image generated by a camera. Ans. 16 (citing Sonnabend ¶ 147). However, the Examiner relies on Mohottala, in combination with Sonnabend, for expressly disclosing a camera for generating an image of a parking spot and a laser range sensor for scanning the imaged parking spot. *Id.* at 7–8; *see also* Ans. 17 (citing Mohottala, 17–19). .

Appellants argue paragraph 184 of Sonnabend does not teach "determining an occupation status based on a[n] image generated by a camera relative to a predetermined image of the parking spot." App. Br. 10. Appellants further argue the Examiner's assertion is inconsistent with the Examiner's finding that Sonnabend does not disclose a camera or a laser scanner calibrated with the camera to scan parking spots. *Id.* at 11 (citing Final Act. 6). Furthermore, Appellants argue paragraph 147 of Sonnabend does not disclose *how* Sonnabend's camera management system utilizes a camera or mobile device "to determine any open spots, vacant spots, recently vacated spots, valet only sites etc." Reply Br. 7. Appellants further contend, "nothing in *Moho* is concerned with determining occupation status of [a] parking space." *Id.* at 8.

We are not persuaded the Examiner erred at least because Appellants' arguments are not responsive to the Examiner's rejection but, instead, improperly attack the references individually rather than addressing the combined teachings. *See, e.g., In re Keller*, 642 F.2d 413 (CCPA 1981); *In re Merck*, 800 F.2d 1091 (Fed. Cir. 1986). Specifically, the Examiner relies on paragraphs 17, 29, 147, and 184 of Sonnabend to teach a system that

determines "open/vacant parking spot[s]" based on an image generated by a camera. Final Act. 6–8; Ans. 16–18. The Examiner finds Sonnabend fails to expressly disclose using a laser scanner and a camera together to scan parking spots. Final Act. 6. Therefore, the Examiner relies on Mohottala, not Sonnabend, to expressly teach "a laser scanner and a camera to scan and generate image data of on-street parked vehicles." Ans. 17; *see also* Final Act. 7–8 (citing Mohottala, 17–19); *see also* Mohottala, 18 (§ 3 discussing calibration of laser and image data). The Examiner finds, and we agree,

> The teachings of Sonnabend are directed to [an] integrated parking information collection system and Mohottala is directed to a system that fuses data from a vision sensor and laser sensor for detection and classification. A person having reasonable skill in the art would be motivated to combine the teachings of Sonnabend and Mohottala in order to provide a highly accurate and reliable means for detecting on-street parked vehicles (Mohottala, abstract).

Ans. 18.

For the reasons discussed *supra*, we are unpersuaded of Examiner error. Accordingly, we sustain the Examiner's rejection of independent claim 1 and, for similar reasons, the rejection of independent claim 11, which recites similar limitations and was argued together with claim 1. Additionally, we sustain the Examiner's rejections of dependent claims 2–4, 6–10, and 13–21, which were not argued separately. *See* App. Br. 11.

Claim 5

Appellants do not separately argue with particularity the rejection of claim 5 (dependent from claim 1) and, thus, we sustain the rejection of claim 5. *See* App. Br. 11–12.

DECISION

We affirm the Examiner's decision to reject claims 1–11 and 13–21.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED